

NASA Aeronautics

Presentation to EIWAC2015 TPC #1

William C. Johnson

May 12, 2015

What is NASA Aeronautics working on?



Our research continues to show how we're with you when you fly.

Air traffic management tools that reduce delays and save fuel

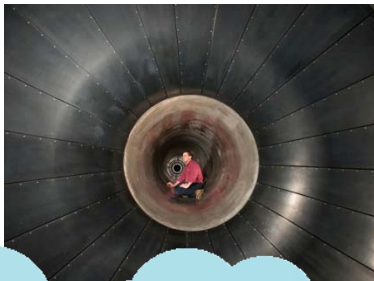
Aircraft shapes that reduce aviation's impact on the environment

Data that reveals the impacts of alternative jet fuels on emissions

Tests of new technologies that increase autonomy in the aviation system

Technologies that lower the volume on sonic booms

Ground tests on ways to detect and prevent engine icing in jet engines



What vision has NASA set for aviation?

A revolution in sustainable global air mobility.



How is NASA improving aviation today?



We are meeting global aviation challenges by using six research thrust areas to organize our research.



Safe, Efficient Growth in Global Operations

- Enable full NextGen and develop technologies to substantially reduce aircraft safety risks



Innovation in Commercial Supersonic Aircraft

- Achieve a low-boom standard



Ultra-Efficient Commercial Vehicles

- Pioneer technologies for big leaps in efficiency and environmental performance



Transition to Low-Carbon Propulsion

- Characterize drop-in alternative fuels and pioneer low-carbon propulsion technology



Real-Time System-Wide Safety Assurance

- Develop an integrated prototype of a real-time safety monitoring and assurance system



Assured Autonomy for Aviation Transformation

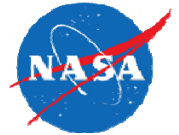
- Develop high impact aviation autonomy applications

What does NASA Aeronautics do?

NASA is with you when you fly.



NASA Aeronautics Contributions



Commercial Supersonic



Vertical Lift



Advanced Composites



Advanced Air Transport



Environmentally Responsible Aviation



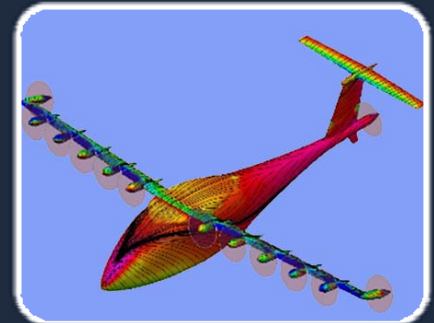
UAS in the NAS



Convergent Solutions



Transformational Tools & Technologies



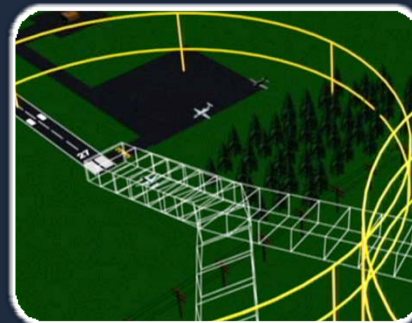
Safe Autonomous Systems Ops



Smart NAS



Air Traffic Management



Evaluation & Test Capabilities

